CLAIMS

1. A fire resistant composition comprising:

a silicone polymer;

mica in an amount of from 5% to 30% by weight based on the total weight of the composition; and

a glass additive in an amount of from 0.3% to 8% by weight based on the total weight of the composition.

2. The composition according to claim 1, wherein the glass additive is present as glass frits.

3. The composition according to claim 1, wherein the glass additive has a softening point below 1050°C.

4. The composition according to claim 1, wherein the glass additive has a softening point below 800°C.

5. The composition according to claim 1, wherein the glass additive has a softening point between 300 and 800°C.

6. The composition according to claim 1, wherein the glass additive comprises a blend of glass additives having low and high softening points.

7. The composition according to claim 1, wherein the glass additive has an alkali metal oxide content of less than 50% by weight of the glass additive.

8. The composition according to claim 1, wherein the glass additive has an alkali metal oxide content of less than 30% by weight of the glass additive.

9. The composition of claim 1, further comprising fire retardant materials which form oxides when exposed to ceramic formation temperatures selected from the group consisting of zinc borate, magnesium hydroxide and alumina trihydrate.

10. The composition according to claim 8, further comprising inorganic fibres which do not melt at 1000°C.

11. A composition according to claim 1, consisting essentially of the silicone polymer, mica, glass additive and a crosslinking agent.

12. The composition of claim 1, wherein the mica is a phlogopite mica.

13. The composition of claim 1, wherein the mica is a muscovite mica.

14. The composition of claim 1, wherein the mica has a mean particle size range of from 15 μm to 250 μm.

15. The composition of claim 14, wherein the mica has a mean average particle size range of from 50 μm to 200 μm.

16. The composition of claim 1, further comprising a silane coupling agent.

17. The composition of claim 16, wherein the silane coupling agent is selected from the group consisting of vinyltrimethoxysilane, aromatic silane, aryl silane, epoxysilane, acrylsilane, polymeric silane and mercaptosilanes

18. The composition of claim 16, wherein the silane coupling agent is present in the amount of from 0.05% to 2%.

19. A fire resistant composition comprising:

a polymer component consisting essentially of a silicone polymer;

mica in an amount of from 5% to 30% by weight based on the total weight of the composition; and

a glass additive in an amount of from 0.3% to 8% by weight based on the total weight of the composition.

20. The composition according to claim 19, wherein the glass additive is present as glass frits.

21. The composition according to claim 19, wherein the glass additive has a softening point below 1050°C.

22. The composition according to claim 19, wherein the glass additive has a softening point below 800°C.

23. The composition according to claim 19, wherein the glass additive has a softening point between 300 and 800°C.

24. The composition according to claim 19, wherein the glass additive comprises a blend of glass additives having low and high softening points.

25. The composition according to claim 19, wherein the glass additive has an alkali metal oxide content of less than 50% by weight of the glass additive.

26. The composition according to claim 19 wherein the glass additive has an alkali metal oxide content of less than 30% by weight of the glass additive.

27. The composition according to claim 19, further comprising at least one fire retardant material selected from the group consisting of zinc borate, magnesium hydroxide or aluminium hydroxide.

28. A fire resistant protection composition comprising:

a silicone polymer;

a mica in an amount of from 5% to 30% by weight based on the total weight of the composition; and

a limited amount of glass additive sufficient to ensure the formation of a self supporting porous ceramic material at temperatures above the decomposition temperature of the silicone polymer and below the fire rating temperature of the composition.

29. The composition of claim 28, wherein the fusion temperature of the composition is above the fire rating temperature.

30. The composition of claim 28, wherein the composition undergoes a volume shrinkage of less than 10% when heated to the fire rating temperature.

31. The composition of claim 28 wherein the composition undergoes a volume shrinkage of less than 5% when heated to the fire rating temperature.

32. Use of a composition as claimed in any one of claims from 1 to 31 as a firewall lining, a fire partition, a screen, a ceiling or lining, structural fire protection, a fire door insert, a window or door seal, an intumescent seal, or in an electrical switchboard cabinet.

33. Use of a composition as claimed in any one of claims from 1 to 31 for coating of an electrical conductor.

34. An electrical cable comprising a composition as claimed in any one of claims from 1 to 31.

35. An electrical cable comprising a conductor and a polymeric composition extruded over the conductor, the polymeric composition comprising:

a silicone polymer;

mica in an amount of from 15% to 30% by weight based on the total weight of the composition ; and

a glass additive in an amount of from 0.3% to 8% by weight based on the total weight of the composition.

36. The electrical cable of claim 35 wherein the mica has a mean particle size in the range of 50 μm to 200 μm.

37 An electrical cable of claim 35, wherein the mica is muscovite mica.

38. An electrical cable of claim 35 wherein the glass additive is present as glass frits.